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American Research Center in Egypt, Inc.

NEWSLETTER



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Summer 1979

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Linda Pappas Funsch, Editor

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ARCE NEWSLetter from the U.S. Director

Dear Friends:

After more than three years in Princeton, I will be stepping down as the ARCE's U.S. Director and Editor of this NEWSLETTER on October 1, 1979.

To all of you who continue to support and encourage the important work of this organization, I extend my best wishes for lasting success.

Yours sincerely,

Linda Pappas Funsch

Linda Pappas Funsch
U.S. Director

1980-81 Fellowship Deadline

As announced earlier, the American Research Center in Egypt will award funds for fellowships in Egypt during 1980-81.

Fields of Study	Egyptology, archeology, art history, the humanities, social sciences, and related disciplines.
Eligibility	Ph.D. dissertation students, having successfully completed preliminary exams; post-doctoral scholars.
Duration	Three to twelve months, during the period June 1, 1980 - September 30, 1981.
Allowances	Most ARCE Fellows receive a monthly stipend, payable in Egyptian currency, commensurate with academic standing and number of accompanying dependents, plus round-trip air transportation for recipients only. A limited number of U.S. dollar awards (maximum: \$20,000 for 12 months) is available to senior scholars in the humanities.
Application Deadline	November 30, 1979, for receipt of applications, letters of recommendation, and filing fees.

The ARCE Fellowship Program is made possible by grants from the Smithsonian Institution's Foreign Currency Program, the National Endowment for the Humanities, and the International Communication Agency.

NEWS FROM CAIRO

Zaki Iskander Hanna: November 16, 1916 - July 16, 1979

Zaki Iskander was graduated with honors in chemistry from the Faculty of Science, Cairo University, in 1935. Although appointed to the same Faculty, he was attracted by Egyptian antiquity, and transferred in 1936 to the Department of Antiquities, to act as chemist in its laboratory, annexed to the Egyptian Museum. There he worked with Alfred Lucas, then acting as consulting chemist for the Department.

Trained by Lucas, Zaki Iskander received the diploma of the Institute of Egyptology in 1942, an M.Sc. in organic chemistry in 1945, and a Ph.D. in organic chemistry in 1953. In 1953, he became director of the Department of Antiquities' Research Archaeological Laboratory; in 1966, Director General of Technical Affairs of the Department; and in 1972, Director General of the Department itself (later the Antiquities Organization). Despite these official appointments, he always kept in touch with his laboratory and its projects, and was recognized as one of the world authorities on the preservation and restoration of antiquities.

Zaki Iskander's contributions to Egyptology fall into three areas: training laboratory assistants and teaching hundreds of students in chemistry and archeology in various universities; treating and restoring thousands of objects and scores of monuments; publication of more than twenty-five articles and seven books on his work and discoveries. He also served as special consultant for UNESCO on special missions to Pakistan and Italy, and in the salvage of the temples of Philae in Egypt. For his contributions to the field, Zaki Iskander was chosen as member of numerous institutes and scientific organizations, including the Institut d'Egypte, the International Center of Museums, and the International Center of Antiquities and Ancient Sites. On recommendation of the Egyptian Ministry of Culture and Information, he was offered the Nasser Prize of the USSR in 1972. In 1974, he was elected an honorary member of the American Research Center in Egypt.

With the disappearance of Zaki Iskander, Egypt has lost one of her most distinguished scholars. To his friends, colleagues, and students, and most especially to his devoted spouse, Ikbāl Kamel, we extend our deepest sympathy. For myself, I indeed lost in Zaki Iskander a life-time colleague and friend.

Labib Habachi

مركز البحوث المصرية

ANTIQUITIES NEWS

Items culled from the local Cairo papers and the grapevine.

Universities

A department of archeology will be created in the Faculty of Arts, Assiut University, by decision of the University Council (EG 29.iv).

A new laboratory for the conservation and repair of Egyptian antiquities has been opened at one of the annexes of the Faculty of Antiquities of Cairo University. Financed by a \$250,000 grant from Volkswagen and a matching \$200,000 from Cairo University, the laboratory contains the most advanced equipment available, and is under the direction of Dr. Saleh Ahmed Saleh, director of maintenance and repair for the Egyptian Antiquities Organization. Work will begin on pieces in the collection of the Egyptian Museum, Cairo, but will eventually extend to all archeological sites in Egypt (EG 14.vi).

Museums

Mr. Mohammed Mohsen, formerly curator of Greco-Roman antiquities, has been appointed director of the Egyptian Museum, Cairo. He replaces Mr. Hassan el-Ashiry, who has been appointed technical director of the Center of Documentation.

Museum experts from Egypt and abroad are looking into ways of renovating and extending the Egyptian Museum. One section is to be set aside for Egyptologists who wish to work with objects from the museum. The project is being carried out with the aid of UNESCO.

The Museum is also preparing a special exhibit on the ancient Egyptian family and child, in honor of the International Year of the Child. The exhibition is to include objects showing daily life and motherhood, and a large collection of children's toys (EG 10-11.vi).

Tourism

The Antiquities Organization has postponed until January, 1980, implementation of its decision to charge a LE 2 admission fee to the Pyramids area in Giza. The Ministry of Tourism and several other private and governmental bodies have protested the suddenness of the decision and the unfavorable advantage it supposedly will give to foreign tourist agencies over local agencies, who are less able to absorb the increase. The new fee is part of a general increase affecting all major monuments and

museums. Giza, the Valley of the Kings, and Sound and Light are to be raised to LE 2, other sites to LE 1, and museums from PT 25 to LE 2. Egyptians are to enjoy reduced fees in each instance. Implementation of the increase, however, will depend on "the results of the heated debate which is now going on in the tourist and local government circles" (EG 10.v).

The Pyramids area in Giza is to receive a number of information boards for tourists in French, English, and Arabic. The garden in the tourist area at Mit Rahina (Memphis) is to be improved and running water added (EG 26/6/79).

Plans are being studied to revive the Pyramids Plateau Tourist Project, cancelled last year. The project, including hotels and tourist villages, originally was to have been set up on the Giza plateau above the pyramids, but was cancelled by President Sadat. The project is to be revived in one of four alternative locations on the Alexandria/Cairo and Cairo/Fayum highways. Engineers are to study the alternative areas to determine whether they pose any danger to antiquities (EG 9/7/79).

The Siwa Oasis is to be converted into a major tourist attraction with facilities for visitors. Construction has started on a new road from Mersa Matruh to Siwa, scheduled for completion in 1981 at a cost of LE 28 million (EG 4/7/79).

Meanwhile, the Egyptian Antiquities Organization has drawn our attention to the temple of Amun in the Siwa Oasis as one of the areas most in need of conservation. Large cracks have appeared in the walls and the pylon is in danger of collapse. In view of the new tourist project, the need for such conservation is particularly urgent.

Finds

Mr. Abdel Aziz el-Shendawili, senior antiquities inspector in Upper Egypt, has announced the discovery of a hoard of 1036 nickel coins of Roman date in Zafiriya village, Governorate of Qena (EG 26/6/79).

Conservation

Dr. Mahmud Fawzi, Chairman of the National Committee for the Preservation of Egyptian Arab Heritage, has launched an appeal for the preservation of some 500 Islamic monuments in Cairo. According to official statistics, Cairo has lost some 123 registered monuments during the past 50 years to severe damage or encroachment. The Ministry of Culture allocates LE 3,200,000 yearly to the preservation of monuments, of which 2,200,000 goes for salaries, and the rest for maintenance and excavation (EG 19/6/79).

A new Society for Lovers of Egyptian Antiquities has been founded under the directorship of Mme. Sadat. The society's aims are the preservation and protection of Egyptian antiquities, in particular Islamic buildings in Cairo; encouragement of properly conducted archeological research; and exchange of views with similar societies in other countries. Members of the society are to give public lectures on different archeological sites (EG 28/6/79).

The Egyptian Antiquities Organization plans to make a comprehensive survey of archeological sites in collaboration with the Remote Sensing Center. The goal of the project is to produce a new map of archeological sites, which will then be provided to the Ministry of Reconstruction and New Communities so that sites will be protected in any future development schemes (EG 7/6).

The Remote Sensing Center collaborated this year with the Berkeley Theban Map Project in producing new aerial maps of the Theban Necropolis.

The Egyptian Antiquities Organization has announced plans to begin repair work on the Great Pyramid this fall. Funds have been made available to consolidate eroded blocks on the south face by filling in gaps with new limestone of a similar type, chemically treated to resist the erosion that has damaged the ancient blocks (EG 5/7/79).

Studies are also being undertaken by the Egyptian Antiquities Organization, in collaboration with a Swedish consultant firm, for repair work and conservation of the Sphinx, the Boat Museum, and the Tomb of Nefertari in Luxor. Plans being studied for the conservation of the tomb include a project to separate it entirely from the surrounding rock to prevent damage due to shifts in the geological layers of the gebel (EG 9/7/79).

Reconstruction of the temples of Philae is scheduled for completion by the end of the year. To mark the end of the salvage project, the Egyptian Antiquities Organization is organizing an international festival. The target date is March 10, 1980, the twentieth anniversary of the beginning of the Nubian salvage campaign (EG 9/7/79).

Personnel

With the announcement of the new cabinet, Mr. Mansur Hassan, Minister of State, has been given responsibility for cultural affairs. The status of the cultural section of the Ministry of Education, Scientific Research, and Information is currently in question.

Antiquities Trade

Egyptian police have seized more than one million Egyptian pounds' worth of antiquities from a shop and flat in Gumhuriya Street, Cairo. Among the artifacts recovered were Greek, Coptic, and Islamic antiquities from the Fayum, Beni Suef, and the site of medieval Fustat, and a gilded pharaonic sarcophagus 2.5 m in length (Egyptian Gazette 25.v.79).

The present antiquities law is to be revised with a view to preventing smuggling of antiquities abroad. A deadline will be set for those in possession of antiquities in Egypt (with or without license) to register them with or surrender them to the authorities. In connection with this new law, the police have been conducting an extensive campaign to crack down on antiquities hoarders and illegal dealers in Egypt. Recently, a "huge amount" of antiquities, primarily Islamic, and valued at LE 1.5 million, was seized in a flat in Aguza and an antiquary shop in Sarwat Street, Cairo (EG 2/7/79).

FIELDNOTES

The Theban Royal Tomb Project

The second season of the Brooklyn Museum's Theban Royal Tomb Project ended in May after a five-month season. John Romer, field director for the project, has kindly supplied us with a copy of his preliminary report from which the following notes have been abstracted.

The expedition completed its detailed physical survey of the Valley of the Kings, focusing on the geology and sedimentation of the Valley and on the present effects of tourism on its monuments. After analysis of the data, the Brooklyn Museum will submit recommendations to the Antiquities Organization for better protection of the monuments and improved conditions for tourists.

The archeological and epigraphic team completed its work in the tombs of Ramesses X and XI. Both tombs were cleaned and their inscriptions were drawn and photographed. In the tomb of Ramesses XI, an inscription of Pinodjem I was discovered overlying an earlier inscription of Ramesses XI. In the course of clearing this tomb, the expedition discovered workmen's tools and evidence of efforts to prop up loose sections of the burial chamber. This, together with the inscription of Pinodjem, suggests that work on the tomb was abandoned in progress, due to dramatic shifts in the limestone of the surrounding gebel.

In clearing the tomb, the Brooklyn team discovered remains of Coptic occupation in the upper sections; in the burial chamber and in the corridor leading to it, many small pieces of faience inlay, gesso, gold leaf, and wood were found, suggesting that the lower part of the tomb was used as a place in which burial equipment from other tombs was plundered.

The great pit (approximately 10 m. deep) in the center of the burial chamber of Ramesses XI was found to contain some intrusive private burials of Dyn. XXI-XXII, largely destroyed by fire. Beneath these, fragments of other royal burial were discovered, including three shawabtis of Ramesses IV, a fragment of wood with the titles of Hatshepsut, and some fragments of resin-covered funerary equipment of Tuthmosis III, some of which may join with damaged pieces now in the Egyptian Museum. These fragments suggest to the excavators that the tomb of Ramesses XI was used as a collection point for the mummies and burial equipment later found in the royal cache above Deir el-Bahri.

At the mouth of the shaft, the Brooklyn team uncovered three deposits in the floor of the burial chamber, covered with lime-stone chips and white plaster (a fourth deposit had been plundered). The deposit in the northeast corner contained a fine group sculpted in beeswax, 14.5 cm high, showing the king with both hands raised before the goddess Maat; the goddess holds a lotiform staff. Between the two figures is a small piece of openwork design, showing Horus spearing a hippopotamus on a bark supported by two Hathor heads; this may have been intended for the top of the lotiform staff. The same deposit contained two gold and several faience plaques with the nomen and prenomen of Ramesses XI, a beeswax statue of four baboons guarding the Lake of Fire, and a statue of a baboon in Nile mud. Similar groups were found in the two other deposits, although the king with Maat appeared only in the northeast deposit.

The Theban Royal Tomb Project is part of the Brooklyn Museum's Theban Expedition, and is funded by a grant from the Coca-Cola Company.

مركز البحوث الأمريكية بمصر

AMERICAN RESEARCH CENTER IN EGYPT

Research Fellowships for the Year 1979-80

Funded by the International Communication Agency

NAME	RESEARCH TOPIC
+Abdel-Massih, Ernest T. University of Michigan, Ann Arbor	"Research in Arabic of the Communica- tions Media"
*Adams, Richard H., Jr. University of California, Berkeley	"Local Institutions and Agricultural Development in Egypt"
*Botman, Selma Harvard University	"World War II and the Culture of Political Opposition in Egypt - 1939-1951"
*Egger, Vernon O. University of Michigan	"An Egyptian Intellectual: The Career of Salamah Musa"
+King, David A. Project Field Director, ARCE, Cairo	"History of Astronomy in Medieval Egypt"
*Krieger, Laurie University of North Carolina	"Menstruation, Gender Roles, and Contraceptive Acceptability among Cairene Women"
*Lockman, Zachary Harvard University	"Labor Organization in Egypt's Transport Sector"
*Makdisi, John A. Harvard Law School	"The Islamic Law of Sales: Its Examination from the Perspective of the Islamic Scholars"
*Mattar, Philip Columbia University	"Al-Hajj Amin al-Husayni: Founder of Palestinian Nationalism"
+Najjar, Fauzi M. Michigan State University	"Constitutional Change and Moderniza- tion in Egypt, 1962-1970"
+Northrup, Linda S. McGill University	"A Study in Medieval Arabic Diplomatic"
+Toledano, Ehud R. Princeton University	"Crime and Society in Post Muhammad 'Ali Cairo, 1848-1863"
+Wilson, Dunning S. University of California, Los Angeles	"Archival Sources for the History of U.S. - Egyptian Relations"

+Faculty
*Student

Funded by the Smithsonian Foreign Currency Program

NAME	RESEARCH TOPIC
*Allen, Marti Lu University of Michigan, Ann Arbor	"A Stylistic, Iconographical, and Technical Study of Terracotta Figurines Excavated in the Fayoum"
+Crececius, Daniel N. California State University, Los Angeles	"Index of Waqfiyāt from the Ottoman Period Preserved in the Archives of the Ministry of Awqaf, Cairo"
+DeJesus, Prentiss S. Centre Audio Visuel, France	"Research in Egyptian Metallurgy from Predynastic Times to the Middle Kingdom"
+Kaegi, Walter E. University of Chicago	"Byzantine Egypt During the Arab Invasion of Palestine and Syria"
*Koptiuch, Kristin University of Texas, Austin	"Traditional Craftsmen in the Modern Market: Urban Potters of Cairo and Qena"
*Lacovara, Peter G. The Oriental Institute, University of Chicago	"Settlement Archaeology of the New Kingdom Town of Deir el Ballas"
*Lane, Mary Ellen Sorbonne, Paris	"The Tree-Goddess in Egyptian Art and Religion"
*LaTowsky, Robert J. SUNY-Binghamton	"Regional Development and Rural Industrial Labor Migration in Upper Egypt"
*Meltzer, Edmund S. University of Toronto	"Dialect Features in Middle Kingdom Inscriptions"
*Sherman, Elizabeth J. The Oriental Institute, University of Chicago	"A Study of the Egyptian 'Biography' of the Late Period"
*Taylor, Richard C. University of Toronto	"Part of Thesis Entitled: Being and Causality in the Liber de Causis: A Study of Medieval Neoplatonism"

Funded by the National Endowment for the Humanities

NAME	RESEARCH TOPIC
+Haddawy, Hussayn F. University of Nevada, Reno	"Psychology and Poetics in Islamic Philosophy"
+Zartman, I. William New York University	"Images of Egyptian Foreign Policy and World Order Strategies"

NEWS OF OTHER ASSOCIATIONS

Meetings and Conferences

The Thirteenth Annual Meeting
of the
MIDDLE EAST STUDIES ASSOCIATION
November 7-10, 1979
at the Hotel Utah
Salt Lake City, Utah

Middle East Studies Association
Hagop Kevorkian Center for
Near Eastern Studies
New York University
50 Washington Square South
New York, New York 10003

The One-Hundred-and-Ninetieth Annual Meeting
of the
AMERICAN ORIENTAL SOCIETY
April 15-17, 1980
at the Sheraton-Palace Hotel
San Francisco, California

American Oriental Society
329 Sterling Memorial Library
Yale Station
New Haven, Connecticut 06520

DECLINE OF THE MODERN NUBIAN LANGUAGE IN EGYPT

Aleya Rouchdy
Wayne State University
ARCE Fellow, 1978-79*

This report is submitted to confirm work done under an ARCE grant by Aleya Rouchdy and assisted by grants from the Joint Committee on the Near and Middle East of the American Council of Learned Societies and the Social Science Research Council, during her sabbatical year, 1978-79.

The field research was conducted in different Nubian-speaking communities in Egypt: Cairo, Aswan, and Kom-Ombo. In Cairo, the three large communities located in Abdeen, Bulaq Sharkas, and Imbaba were visited. Nubians living in other parts of Cairo such as Dokki, Meadi, or Giza were also interviewed. In Upper Egypt, Aswan, I visited the Gizira, Gharb Suhayl, and El-Sel; and in the Kom-Ombo region, Dahmit, Dar el-Salam, Ballana, Abu Simbel, and Tomas wi Afiya.

During my field work, I was accompanied by a Nubian assistant, Mohamad Fikri, who, in 1963, had participated in the relocation of Nubians which was conducted by the Social Science Research Center of the American University in Cairo. Thus, Fikri was not only familiar with both the setting and the people, but was also of great help for me in establishing a good rapport with the Nubians I interviewed.

When I first started my work on the Nubian language, I intended to examine one dialect or *rutāna*, the Matoki¹ dialect, which is spoken by the Kenuz, in order to explore the growing influence of Arabic and the changes that occurred in the dialect due to interference from Arabic, the dominant and official language of the second dialect,² Fadicca,³ spoken by the Nubiyyin.

I proposed three problems for a research focus:

*Funded, in part, by the Special Foreign Currency Program, Smithsonian Institution, Washington, D.C.

¹ *Mato* means east, and *Matoki* refers to the dialect spoken by the people of the east.

² I am using the term dialect instead of language since both Fadicca and Matoki belong to the Nile Nubian language group and are closely related linguistically.

³ Many of the Fadicca speakers in Egypt refer to their dialect as Noubi. Herman Bell uses the term *nobīn* when he refers to Mahas-Fadicca and Mutwalli Badr uses the term *nobin* in his book *nobīn nog gery*.

- I. The first problem was the gathering of data on word order change which might be related to contact with Arabic. The accepted word order for both Matoki and Fadicca is an SOV order, with an alternative order OSV. For instance, in Matoki the sentence 'the man is carrying the basket' would be id karaji injikagi or karaji id injikagi. Changes to an SVO order, which is also the order of Egyptian colloquial, were noticed during my interviews in Cairo. In the Kom-Ombo region an almost strict SOV order was maintained.
- II. The second problem I proposed was the gathering of data on morphological variation. The plural in both dialects, Matoki and Fadicca, is formed by adding a plural suffix to the stem. For example:

English	Fadicca Singular	Matoki Singular	Fadicca Plural	Matoki Plural
'man'	id	id	idi	id-i
'chicken'	dirbad	darbad	dirbad-i	darbad-i
'tongue'	nar	ned	nar-ku	nedd-i
'bone'	gesir	kid	gesir-ku	kidd-i

Borrowed words from Arabic ending in a vowel, the feminine marker, are given the plural suffix /-nči/ in Fadicca and /-či/ in Matoki, e.g.:

English	Fadicca Singular	Matoki Singular	Fadicca Plural	Matoki Plural
'family'	ela	gabila	ela-nči	gabila-či
'plane'	tayyara	tayyara	tayyara-nči	tayyara-či

I had noticed the speaker displaying some variation in the formation of noun and adjective plurals. Some of this variability is found in the choice of /-i/, /-ku/, /-gu/, /-nči/ or /-či/. Many of the Cairo speakers over-generalized the rules of the plural using one plural suffix for the majority of words given to them. For example the word for 'place' in Fadicca is agar. Some speakers used its plural form, agari, instead of the correct form, agarku. In another case, borrowed Arabic words, when changed into the plural were given two plural suffixes, one Arabic and one Nubian. An example for both Fadicca and Matoki would be:

English	Singular	Plural
'book'	kitāb	kutubi

According to the rule of Nubian plural it should have been kitābi. The above example is a case where bilingual interference could create semantic confusion. The word kitābi in Arabic means 'my book' the suffix /-i/ attached to a noun in Arabic marks the possessive of the first person singular. Thus, to avoid this semantic confusion, since most speakers are bilingual, a double plural is used in Nubian, kutubi.

- III. The third and last proposal was an ethnography of communication in the different Nubian communities. This ethnographic work included a good deal of visiting and interviewing the different communities of Cairo and Kom-Ombo. In Cairo, many of the younger generation of Nubians interviewed either did not speak the language at all or spoke very little of it, as opposed to the young Nubians interviewed in the Kom-Ombo area. But, in Kom-Ombo the basic demographic pattern has changed and the new settlement brought the Nubians into closer contact with the Egyptians. This new social and physical setting is leading to a growing impact of Arabic and I think in time it will decrease the usage of Nubian to fewer situations and increase the primary socialization of children in Arabic. However, in relocating the Nubians the Egyptian government acceded to their demand for a unified resettlement rather than dispersing them; this, in my opinion, is slowing the process of linguistic assimilation and, in many cases, is allowing primary socialization in Nubian, a situation that does not occur in Cairo.

This work yielded a number of new insights on language attitudes in the different Nubian communities of Upper and Lower Egypt. I interviewed a total of sixty-four people in Upper Egypt (Aswan and the Kom-Ombo region). I discovered that in Upper Egypt in general, the Nubian language is still strong enough to incorporate new speakers. I met children who were born in non-Nubian communities and who spoke Arabic as their first language, but had learned Nubian as a second language on moving into Nubia where their fathers started to work. The children found that Nubian was essential for communicating with other children. Also some Nubian women from Cairo who returned to Kom-Ombo upon marriage started to learn the language in order to socialize with other women. The majority of women interviewed in Upper Egypt are all Nubian-dominant bilinguals. Male teenagers usually socialize among themselves in Arabic except for an occasional reference, especially when they don't want to be understood by outsiders. On the other hand, Nubians in Cairo are more Arabicized. For instance, women who are very marginal in Arabic, were speaking Arabic to their small children. In Cairo, Arabic, as the dominant language outside and within the family, is very much extended compared to the Kom-Ombo region. This was observed during my frequent visits to Nubian clubs and families.

Up to the time this report was written, I had interviewed forty-six people in Cairo and most of those interviewed were Arabic-dominant bilinguals.

I am of the opinion that there is a rapid language decline among Cairo Nubian speakers and a definite language shift among Upper Egyptian Nubians. The rapidity of the change in Cairo suggests that one must return to the field frequently in order to monitor the process.

I made several visits, observed language usage, and made contacts with leaders in different Upper Egyptian villages and in Cairo in order to administer my questionnaire to a sample of speakers. I conducted interviews with one hundred ten subjects of both dialects. They were given a list containing fifty items requesting singular and plural. They were also given sixty-three sentences to translate from Arabic into the specific dialect. Twenty-nine of the sentences were given to examine verb morphology, and thirty-six sentences to examine the syntactic structure. Speakers included both males and females, ranging from age fourteen to seventy-five. In addition to the formal interviewing in Cairo, Aswan, and Kom-Ombo, I was able to tape some Nubian stories and informal conversation by the same individuals. This was designed mainly to reveal the amount of interference from Arabic in the subject's performance in an informal situation.

Due to the nature of the city, Cairo, work in the different communities was extremely time-consuming because it involved transportation to the different areas and difficulty in having to set appointments. On the other hand, in Aswan and Kom-Ombo, my work was much more rewarding due to the compactness of the physical setting and the ease with which I could see the different speakers.

The first accomplishments of my research were as follows:

1. collection of data on noun-adjective morphology and on word order in both dialects, Fadicca and Matoki;
2. collection of interviews from monolingual and bilingual Nubians of Egypt; and
3. observation of language usage in different contexts and communities, rural and urban.

The second accomplishment would be to analyze the collected material made during my field work and to examine the circumstances associated with language loss or maintenance and to answer some of the following questions:

1. how are the Arabic words adapted to the borrowing Nubian dialects?
2. are the speakers aware of the interference?
3. what area of grammar does Arabic penetrate?
4. how much influence does the new physical and cultural setting have on the loss or maintenance of the Nubian language?
5. is there a forced bilingualism?; if so, will it lead to language loss?

This report does not exhaust even a small amount of information gathered during my sabbatical year in Egypt. Rather, I have attempted to outline some of the major points I will be dealing with when analyzing the collected data. The much more detailed information on the decline, change, or maintenance of the Nubian language will be written in a form which will be of interest to linguists and sociolinguists, especially those pursuing the study of intermediate bilingualism, language change and language choice, and who must have often questioned the validity of Du Bellay's statement: "La même loi naturelle qui commande à chacun de défendre le lieu de sa naissance nous oblige aussi de garder la dignité de notre langue."

AN ETHNOGRAPHIC SURVEY OF A CAIRENE NEIGHBORHOOD: THE DARB EL-AHMAR DISTRICT

Hani Fakhouri
University of Michigan, Flint
ARCE Fellow, 1978-79*

This report is based on an ethnographic survey which was conducted between September 1978 and July 1979. The study focused on the Darb el-Ahmar area, one of the oldest and most densely populated districts in Cairo. The selection of the area was influenced by a proposed plan initiated by the ARCE in 1976 to restore and rehabilitate the Bayt el-Razzaz complex. This complex is a medieval Islamic monument built toward the end of the Mamluk period (15th century) in Egypt. It was felt then that the effort to restore this medieval Islamic monument should not be made in isolation, but rather as a part of an integrated approach, in which the whole area would be the focus of our attention. Thus, while this approach was taken into consideration, my research focused on the following points:

1. historical survey of the area;
2. analysis and description of the spacial and demographic characteristics;
3. formal survey with questionnaires to provide some meaningful insights into the community forces and local problems, as well as to clarify the people's perception of the historical antiquities in their neighborhood;
4. direct observation of life as it is lived in the area; and
5. physical mapping of relevant historical sites.

*Funded by the Special Foreign Currency Program, Smithsonian Institution, and by the National Endowment for the Humanities.

I. New Urban and Demographic Trends

Cairo is experiencing a rapid urban and population growth; consequently, it faces the burdens of urban problems that arise with such a growth and which increase in direct proportion to the increase in population. It is within this context of growth and change that an attempt was made to examine and analyze urban trends in Cairo in general and in the Darb el-Ahmar area in particular.

Cairo was founded around 969 A.D. by Jawhar, a general in the army of the Fatimid Caliph al-Muezz li-Dini Allah. From its birth and through the following five centuries, the city was ruled by various dynasties: the Fatimids, the Ayyubids, and the Mamluks. During the different ruling periods, Cairo was the capital and the center of authority. Each ruler in turn expanded the city, and they all competed in beautifying it. This is reflected in the hundreds of private and public edifices that are still standing, despite centuries of neglect. The glory of Cairo, as a city, began to decline with the conquest and the capture of the city by the Ottoman Turks around 1517 A.D., and Cairo remained stagnant until the 19th century. With the beginning of Mohamed Ali's reign and that of the Khedive Ismail, the city started a period of renaissance with a European tone. By the end of the 19th century, Cairo was expanding beyond the old and the medieval physical boundaries of the city. The new expansion moved the focus of attention from the center of the city to the newly built areas.

The new urban expansion led to gradual population shifts, from the center of the old city into new residential areas. The rich moved from the core of the city, leaving behind the poor and unemployed. This trend expedited the process of urban decay in the core of the city. Many of the wakalats, houses and old mansions which had been inhabited by prominent families, cotton brokers, merchants and entrepreneurs, were divided and subdivided in order to accommodate small-scale handicraft industries and to shelter poor and low-income groups. Another trend which also contributed to the physical deterioration of the old section of the city was the flow of migrants from the villages into Cairo. This trend began to gather momentum as early as the later part of the 19th century, leading to a many-fold increase in the population of the city. For instance, at the turn of the 20th century the population of the city was around 700,000 people, and by June, 1979, it was nearly 5.5 million people for the governorate of Cairo and around 8.5 million people for the greater Cairo metropolitan setting. The vast majority of the newcomers settled in the old section of the city. This led to an unbalanced urban growth and uneven population distribution among the various areas within the city of Cairo. The population density varies from 7,000 persons/sq.km. to 107,444 persons/sq.km., with an average of 25,275 persons/sq.km. for the city. However, the highest density tends to be found in the old sections of the city. For example, the population density of the Darb el-Ahmar and of the adjacent districts (Sayda Zeinab, Mosky, and el-Azhar) is respectively 52,353 persons/sq.km., 72,074 persons/sq.km., 97,337 persons/sq.km. and 52,077 persons/sq.km.*

*Figures were taken from the Census record, Cairo, Egypt

II. Physical and Social Characteristics of the Area Surveyed

The area which surrounds Bayt el-Razzaz in the Darb el-Ahmar is located between two main streets. Suq as-Silah from the west and Bab al-Wazir from the east. Both were prominent medieval streets which were developed after 1300 A.D. as major means of communication linking the Fatimid city gate, Bab Zuwaylah, to the Citadel area. The two streets still preserve many of their medieval physical characteristics, which are reflected in the elaborate facades, mosques, minarets, domes, palaces, and religious monuments built by rulers and high-ranking officials. Besides the antiquities, the area contains many small-scale handicraft industries and commercial outlets mixed with a fair to low-grade residential slum. The high population density, traffic congestion and the inefficient delivery system for basic amenities are all contributing to the rapid social and cultural decline of the area.

The preliminary analysis of some of the data collected reflects the following characteristics:

1. First, the vast majority of the people in our sample were not aware of the antiquities in their area, despite the fact that more than half of them were born and raised in the area. Furthermore, when asked about the value and usefulness of such cultural and historic antiquities to their neighborhood and whether they should be rehabilitated or demolished, 22% were in favor of restoration, while 78% referred to the buildings as *kharabah* (ie., "useless ruins") that should be demolished and the land used for building houses to relieve the pressing need for shelter. Actually, during the past half century, eight out of the ten huge mansions which surrounded Bayt el-Razzaz and which were once occupied by prominent Cairene families were demolished and the land was parcelled out to build apartment houses. The other two mansions were subdivided into smaller units to accommodate small-scale industries. Furthermore, during the 1960's, a block away from the Bayt el-Razzaz, several historical structures were demolished in order to allow construction of low-income housing.

2. Second, the respondents to the questionnaire referred to a broad range of problems which they face daily in their neighborhoods. The problems vary from the lack of drinking water to the frequent breaks in the sewage system, from the shortage of electric power to the inadequate garbage collection, from the lack of space for recreational activities to the poor system of health services, and from the crowded schools to the congested traffic system. These problems are not unique to the Darb el-Ahmar area, but are also common to and interconnected with the problems of the city at large.

3. Third, the data collected demonstrate that the average size of household in the area is larger than the average size for both the governorate and the nation in general.

4. Fourth, preliminary analysis of the data collected in the survey shows that the Darb al-Ahmar area contains a mixture of people in terms of their occupations, education, and income. Moreover, this analysis demonstrates that more than half of the heads of household are skilled workers, a fact that puts them in a relatively high income bracket.

This report is an attempt to present an outline of the survey conducted in the Darb al-Ahmar district in old Cairo, a district which still preserves its medieval characteristics in spite of its physical and cultural decline, in general, and total disintegration in certain sections in particular. The much more detailed information in the data collected will shed light on the daily life of the people in their neighborhood. Such knowledge and understanding of the neighborhood social milieu ought to be a prelude to any attempt to restore individual historic monuments and/or to preserve urban wholes.

مرکز البحوث الذریعہ بمصر

APPENDIX: SPECIAL SUPPLEMENT

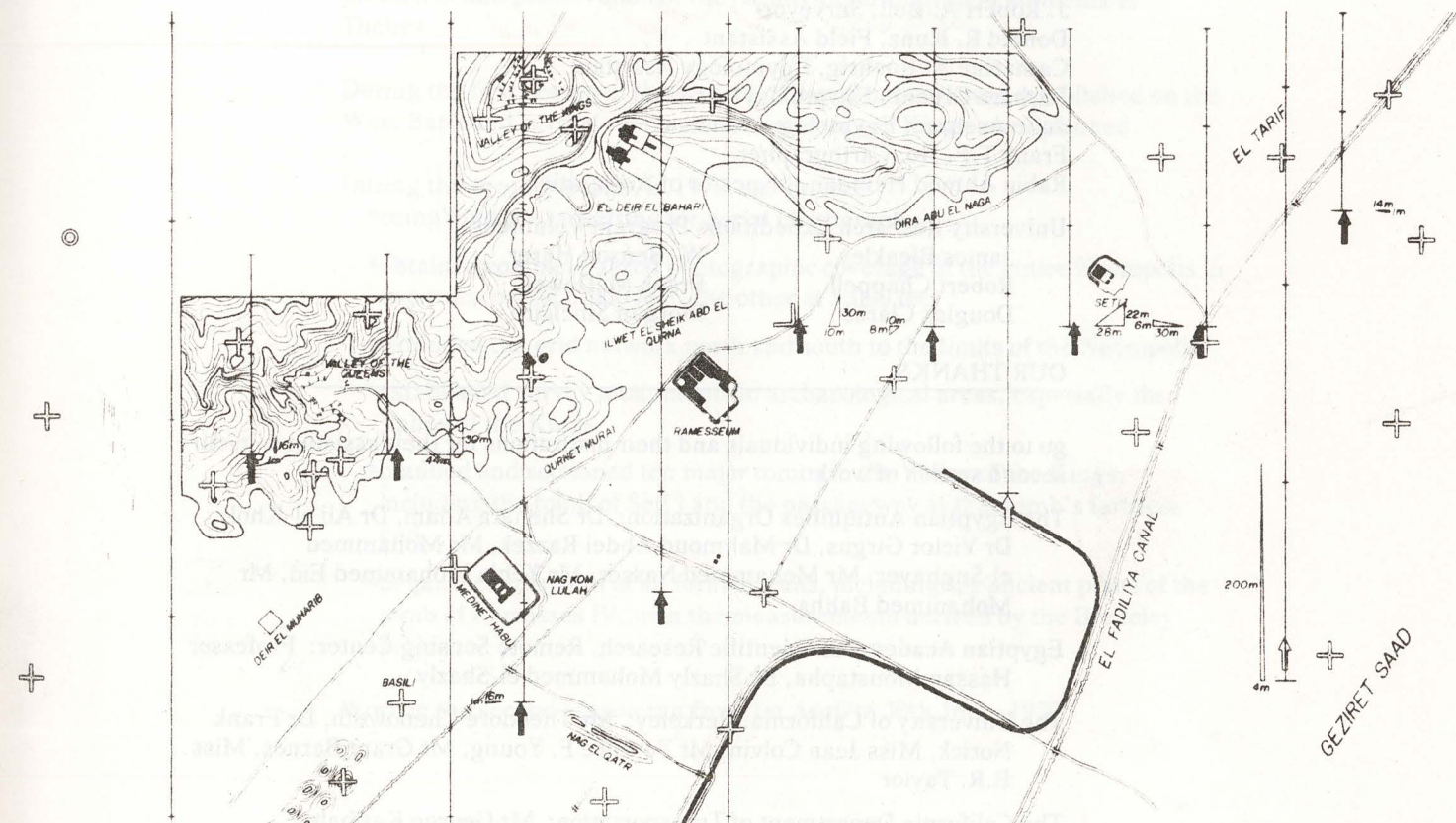
"THE BERKELEY MAP OF THE THEBAN NECROPOLIS"

TO FOLLOW...

THE BERKELEY MAP

OF THE

THEBAN NECROPOLIS



REPORT OF THE SECOND SEASON, 1979

ACKNOWLEDGEMENTS

THE BERKELEY MAP OF THE THEBAN NECROPOLIS

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SUMMARY

No area of the world contains as many famous and important archaeological monuments as the West Bank at Luxor. Yet, in spite of the centuries-old interest in such features as the Valley of the Kings, the Tombs of the Nobles, and scores of other monuments, there exists no accurate or complete map of the Theban Necropolis. Fewer than ten per cent of its monuments have ever been mapped and planned, and very few of these have been plotted accurately.

This project seeks to establish a survey network over the Theban Necropolis; to prepare a suitably detailed 1:500 archaeological map with 1:250 and 1:100 plans and sections of significant archaeological features; to publish these maps and plans together with more detailed records of measurements, in an accurate and permanent form; and to accompany these graphic aids with a concordance and catalog of West Bank archaeological materials.

Such a project as this will provide a useful tool for Egyptologists; but it also will play a significant role in the preparation of long-range plans for the protection and preservation of the rapidly-deteriorating monuments at Thebes.

During the first season of the project, the grid network was established on the West Bank and several tombs in the Valley of the Kings were planned.

During the second season, in 1979, the project:

- completed the targetting for aerial photography
- obtained complete aerial photographic coverage of the entire Necropolis in two runs, one at 3,000 feet, the other at 5,000 feet
- extended the grid network north and south to the limits of the Necropolis
- established survey monuments in archaeological areas, especially the Valley of the Kings
- planned and sectioned ten major tombs in the Valley of the Kings, including the tomb of Seti I and the passageway at that tomb's farthest end
- began a comparison of all former plans, including the ancient plans of the tomb of Ramesses IV, with the measurements derived by the Berkeley project

Work in the second season ran from 1st April to 30th June, 1979.

TOPOGRAPHICAL SURVEYING

COMPLETION OF SURVEY CONTROL

The primary objective of the 1979 Berkeley Project was the completion of the horizontal and vertical control necessary for surface mapping of the Necropolis. The surface mapping of the hypsographical and planimetric features requires an extensive network of control points for the aerial photography and the ensuing photogrammetric compilation. The same network also is the basis for all tomb mapping by conventional field survey methods.

To complete the horizontal network, eight closed loops were traversed in the 1979 season. These, together with the two closed loops of the 1978 season, completed the required basic horizontal control net. Eighty-one stations were established and controlled during the two seasons. For vertical control, elevations (based on the 1921 Survey of Egypt) were determined for all eighty-one stations. Where feasible, elevations were established by differential levelling. Atop the Theban gebel, elevations were derived trigonometrically.

STANDARDS OF ACCURACY

To assure proper control for all the mapping, second-order (modified) accuracy standards were adopted, and required procedures were followed in all field work. Second-order (modified) accuracy standards are:

- Number of courses between azimuth checks: 25 or less
- Azimuth closure not to exceed: 3" per station
- Position closure after azimuth adjustment: 1:10,000
- Distance measurements accurate within: 1:15,000
- Minimum distance to be measured with EDM: 200 metres
- Minimum number of direction observations with a one-second theodolite: 4 positions of circle
- Levelling loop closures not to exceed: $0.008\text{m} \sqrt{\text{loop length in kms.}}$

To attain these levels of accuracy, all distances were measured with a Wild DI-10 Distomat (an EDM, or Electronic Distance Measuring unit), and the directions of all traverse courses were measured with a Wild T-2 theodolite. Within its range, the Distomat measures any course to an accuracy of plus or minus one centimetre. Therefore, at a minimum distance of 200 metres, the theoretical accuracy is one part in 20,000 (1:20,000). The Wild T-2 theodolite, a universally accepted second-order instrument, was shaded by a large umbrella at each set-up. In addition, the accuracy of direction measurement was further enhanced by "forced-centering" traverse technique.

On all ten traverse loops the azimuth closure amounted to two seconds of arc or less for each direction determined. After adjustment for "zero" azimuth closure, the minimal positional closure in any of the loops was 1:35,000. The maximum positional accuracy realized was 1:125,000. Average loop position closure approximated 1:50,000. Thus, all horizontal accuracy requirements were met.

Vertical accuracy standards for differential levelling loops ranged from 0.002 metre to $0.006 \text{ metre} \sqrt{\text{kilometres}}$. Loop closures averaged 0.005 metre $\sqrt{\text{kilometres}}$. Elevations that were derived trigonometrically are accurate enough to render a standard mapping accuracy of 1/10th of a contour interval. For a map having one-metre contour intervals, the accuracy required is therefore one decimetre.

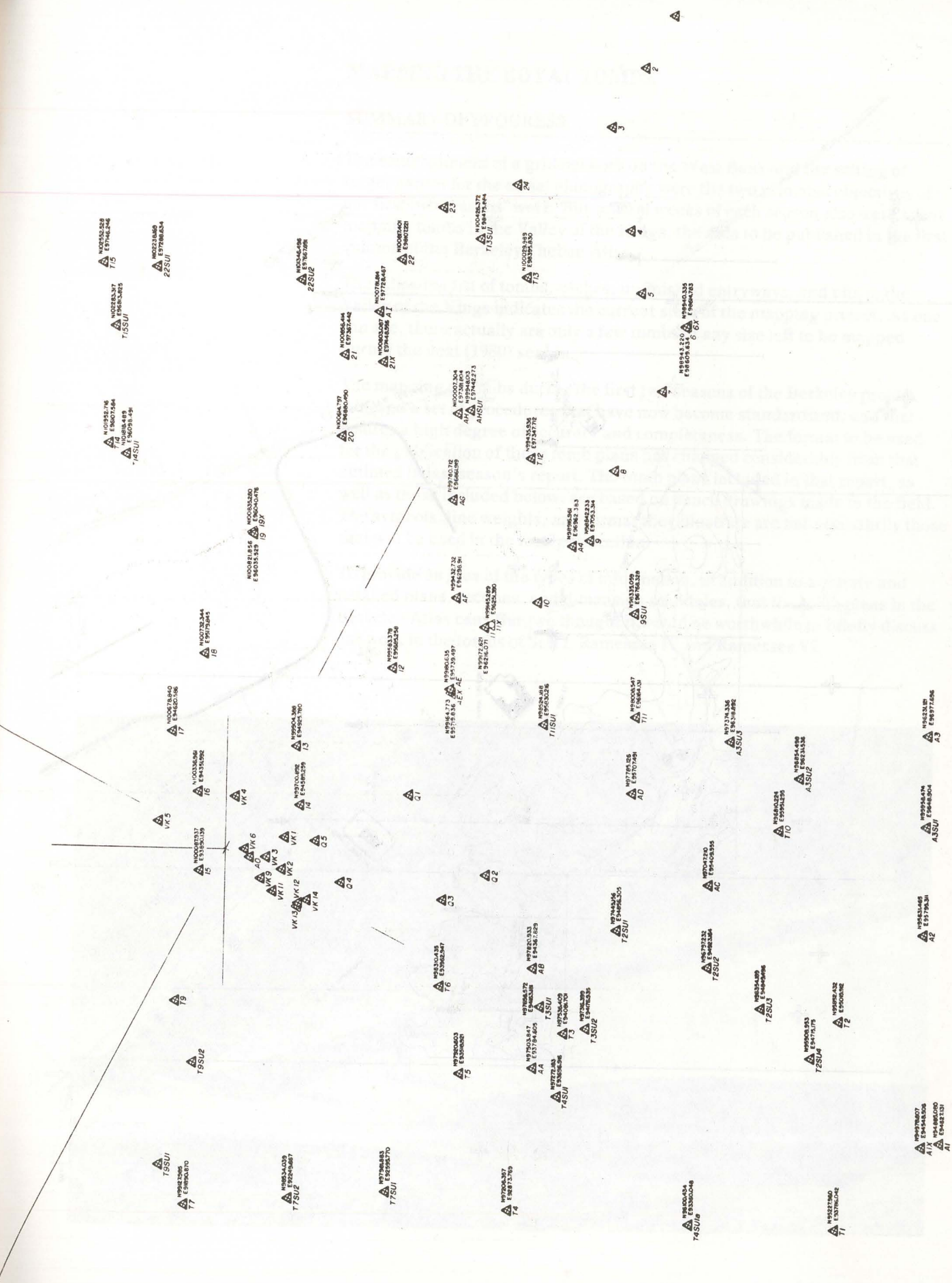
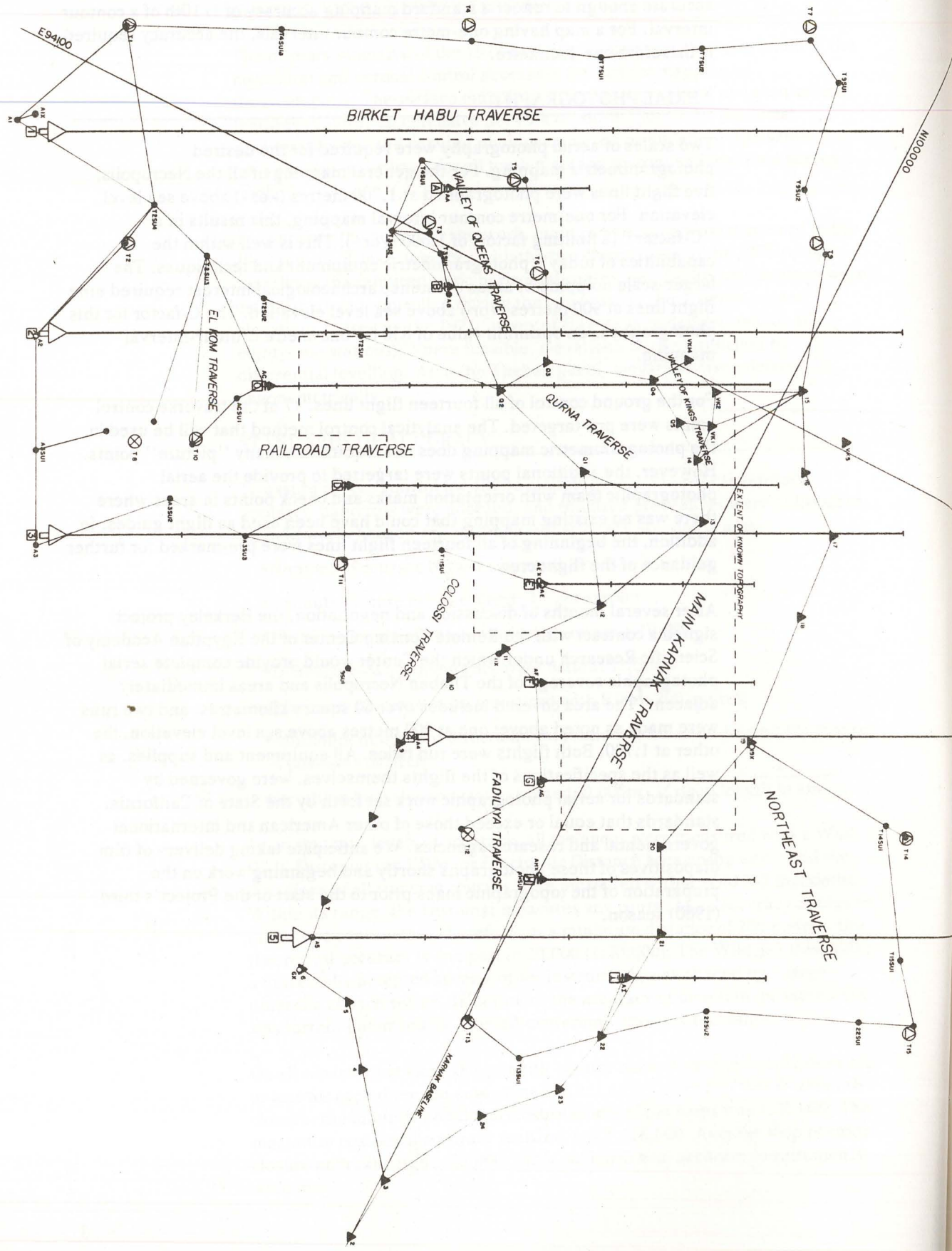
AERIAL PHOTOGRAPHY

Two scales of aerial photography were required for the desired photogrammetric mapping. For the general mapping of all the Necropolis, five flight lines were photographed at 1,700 metres (+ or -) above sea level elevation. For one-metre contour interval mapping, this results in a "C-factor" (a limiting factor) of 1,600 (+ or -). This is well within the capabilities of today's photogrammetric equipment and techniques. The larger-scale mapping of areas of intense archaeological interest required nine flight lines at 900 metres (+ or -) above sea level elevation. The C-factor for this photography is an optimum value of 850 for one-metre contour-interval mapping.

For the ground control of all fourteen flight lines, 47 of the traverse control points were pre-targeted. The analytical control method that will be used in the photogrammetric mapping does not require this many "picture" points. However, the additional points were targetted to provide the aerial photographic team with orientation marks and check points in areas where there was no existing mapping that could have been used as flight guides. In addition, the beginning of all fourteen flight lines were pre-marked for further guidance of the flight crew.

After several months of discussion and negotiation, the Berkeley project signed a contract with the Remote Sensing Center of the Egyptian Academy of Scientific Research under which the Center would provide complete aerial photographic coverage of the Theban Necropolis and areas immediately adjacent. The area covered includes over 60 square kilometres, and two runs were made as noted above: one at 900 metres above sea level elevation, the other at 1,700. Both flights were run twice. All equipment and supplies, as well as the specifications of the flights themselves, were governed by standards for aerial photographic work set forth by the State of California, standards that equal or exceed those of other American and international governmental and research agencies. We anticipate taking delivery of film diapositives of these photographs shortly and beginning work on the preparation of the topographic maps prior to the start of the Project's third (1980) season.

Sub-traverses of the West Bank traverse showing positions of flight lines and control points



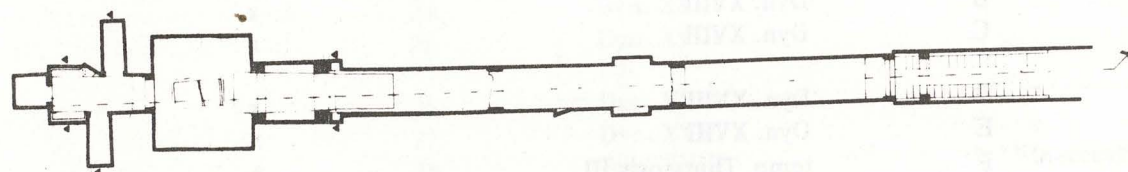
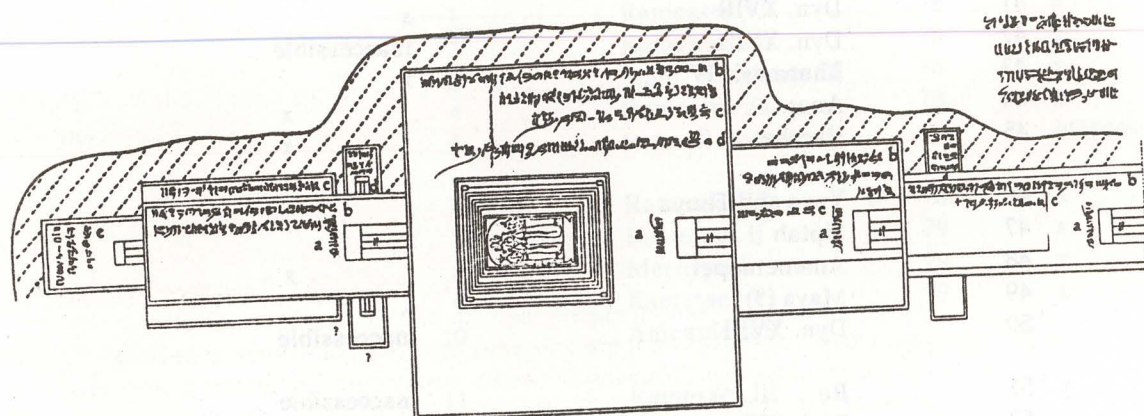
Grid square coordinates of West Bank control points

PROGRESS OF KV TOMB MAPPING

Tomb number	Date and/or Owner	Year mapped	Accessibility	Most	Entry
1	Ramesses VII	78	x		
2	Ramesses IV	78	x		
3	temp. Ramesses III	78	x		
4	Ramesses XI	78	x		
5	temp. Ramesses II		Inaccessible		
6	Ramesses IX	78	x		
7	Ramesses II	79	x		
8	Merneptah	79	x		
9	Ramesses VI	79	x		
10	Amenmesse				x
11	Ramesses III		x		
12	Dyn. XVIII				x
13	Bay (?)				x
14	Tausert (?)				x
15	Seti II				x
16	Ramesses I	79	x		
17	Seti I	79	x		
18	Ramesses X	79	x		
19	Montuherkhepshuf	79	x		
20	Hatshepsut		x		
21	Two women (?)		Inaccessible		
22	Amenhotep III		x		
23	Ay		x		
24	Dyn. XVIII				x
25	Dyn. XVIII				x
26	Dyn. XVIII		x		
27	Dyn. XVIII		x		
28	Dyn. XVIII		Inaccessible		
29	Dyn. XVIII		Inaccessible		
30	Dyn. XVIII		x		
31	Dyn. XVIII				x
32	Dyn. XVIII		x		
33	temp. Thutmose III		Inaccessible		
34	Thutmose III		x		
35	Amenhotep II		x		
36	Maiherperi		x		
37	temp. Thutmose III		Inaccessible		
38	Thutmose I		Inaccessible		
39	Dyn. XVIII		Inaccessible		
40	Dyn. XVIII		Inaccessible		

Tomb number	Date and/or Owner	Year mapped	Accessibility	Most	Entry
41	Dyn. XVIII		x		
42	Dyn. XVIII		Inaccessible		
43	Thutmose IV		x		
44	Anen				x
45	Userhet				x
46	Yuya and Thuya	78	x		
47	Siptah		x		
48	Amenemopet				x
49	Maya (?)		x		
50	Dyn. XVIII		Inaccessible		
51	Re		Inaccessible		
52	Dyn. XVIII		Inaccessible		
53	Dyn. XVIII				x
54	temp. Tutankhamun				x
55	Tiy (?)	79	x		
56	Dyn. XIX				x
57	Horemheb	79	x		
58	temp. Ay				x
59	Dyn. XVIII		Inaccessible		
60	In (?)		Inaccessible		
61	Dyn. XVIII		x		
62	Tutankhamun	79	x		
A	temp. Amenhotep III		x		
B	Dyn. XVIII				x
C	Dyn. XVIII				x
D	Dyn. XVIII				x
E	Dyn. XVIII				x
F	temp. Thutmose III				x
G	?				x
H	Dyn. XVIII				x
I	Dyn. XVIII		Inaccessible		
J	Dyn. XVIII		Inaccessible		
K	Dyn. XVIII		Inaccessible		

- Tombs marked "Inaccessible" cannot be included in the topographic map sheets. Sketch plans of some of these tombs are available from the reports of earlier excavators, however, and these will be included in the accompanying text volume.
- Tombs marked "Accessibility: Entry" are either tombs whose passageways are blocked and whose interiors are therefore inaccessible, or pits, niches, caches, and the like that were never dug more than a metre or two into the gebel.



Plan of the tomb of Ramesses IV, KV 2

THE TOMB OF RAMESSES IV: KV 2

Of all the tombs in the Valley of the Kings, only one has benefitted from careful measurement by earlier archaeologists. That is tomb 2, studied by Howard Carter and Alan Gardiner as a part of their examination of the tomb plan anciently drawn on a papyrus now in the Turin Museum.¹

The plan, on the recto of P. Turin, was first identified as being of the tomb of Ramesses IV by Richard Lepsius in the mid-19th century. To determine whether the ancient plan and the measurements it gave were accurate, Carter re-measured the tomb using an instrument that he had marked off in ancient cubits, palms and digits.

In a number of cases, the measurements obtained by Carter and those of the Berkeley Project differ. This most frequently may be explained by the fact that Carter often took several measurements in a chamber and recorded only the one that corresponded most closely to the P. Turin figure. Berkeley figures, on the other hand, are generally the arithmetic mean of several measurements. In some cases, however, such as the 1.00-metre discrepancy in the height of gate D, one can only assume an error on Carter's part.

The following table shows the various measurements obtained by Berkeley, Carter, and the author of P. Turin. We have converted the Berkeley measurements to cubits, palms and digits using the cubit value Carter himself proposed. Cubic conversions for Carter's figures are his own. The metric values for the P. Turin cubit measurements were calculated by us.

Throughout we have used Carter's suggested values:

1 cubit = 0.5231 metres

1 palm = 0.07472 metres = 1/7 cubit

1 digit = 0.01868 metres = 1/28 cubit = 1/4 palm

Feature	Berkeley		Carter		P. Turin	
	metres	cubits	metres	cubits	metres	cubits
CHAMBER C						
length	13.188	25.1.1	13.264	25.2.2	13.0775	25.0.0
width	3.140	6.0.0	3.157	6.0.1	3.1386	6.0.0
height	5.070 ^a	9.4.3	5.007	9.4.0	5.0060	9.4.0
GATE D						
length	1.078	2.0.1½	1.074	2.0.1½		
width	2.745	5.1.3	2.746	5.1.3		
height	4.900	9.2.2	3.961	7.4.0		
Chamber D						
length	4.710	9.0.0	4.708	9.0.0	4.7079	9.0.0
width	4.200	8.0.1	4.203	8.0.1	4.1848	8.0.0
height	4.405	8.3.0	4.185	8.0.0	4.1848	8.0.0

Feature	Berkeley		Carter		P. Turin	
	metres	cubits	metres	cubits	metres	cubits
NICHE 1						
length	0.670	1.2.0	0.673	1.2.0	0.6725	1.2.0
depth	0.675	1.2.0	0.673	1.2.0	0.6725	1.2.0
height	1.050	2.0.0	1.046	2.0.0	1.0462	2.0.0
GATE E						
length	0.610	1.1.2	0.598	1.1.0		
width	2.755	5.1.4	2.728	5.1.2		
height	4.870	9.2.1				
Chamber E						
length	7.280	13.6.2	7.398	14.1.0	8.3696	16.0.0
width	8.340	15.6.2	8.398	16.0.1½	8.3696	16.0.0
height	5.207	9.6.3	5.231	10.0.0	5.2310	10.0.0
GATE F						
length	7.650	14.4.2	7.660	14.4.2	7.5476	14.3.0
width	2.570	4.6.2	2.615	5.0.0	2.6155	5.0.0
height	3.405	6.3.2	3.456	6.4.1	3.4001	6.3.2
SHELF LEFT						
length	2.400	4.4.0	2.391	4.4.0	2.3913	4.4.0
width	0.850	1.4.1½	0.785	1.3.2	0.8967	1.5.0
height	0.920	1.5.1½	0.897	1.5.0	0.7846	1.3.2
CHAMBER H						
length	4.110	7.6.0	4.017	7.4.3	5.2310	10.0.0
width	1.495 ^b	2.6.0	1.569	3.0.0	1.5693	3.0.0
height	1.792	3.3.0	1.793	3.3.0	1.7935	3.3.0
CHAMBER I						
length	2.750	5.1.3	2.877	5.3.2	5.2310	10.0.0
width	2.250	4.2.1	2.260	4.2.1	1.7935	3.3.0
height	2.074	3.6.3	2.092	4.0.0	2.0924	4.0.0

a. This measurement is the maximum height of the vaulted ceiling.

b. This measurement is the maximum obtained by the Berkeley Project for chamber width, not the mean of several measurements. Still, it is several centimetres less than that given by Carter or by P. Turin.

A comparison of the Berkeley Project's measurements with those of earlier times can offer important clues to the ways in which ancient engineers undertook the carving of tombs in the Theban Necropolis. The fact that most variations between our measurements and those in P. Turin occur in rear chambers, for example, suggests that less care was taken in some instances in the carving of those chambers than in ones nearer the entrance. The likely reason for this is that there was a need to complete carving of the rear chambers ahead of original schedule. This seems to be confirmed by comparing the measurements for the total length of the tomb of Ramesses IV with those given in P. Turin:

Measured from/to	Berkeley		Carter		P. Turin	
	metres	cubits	metres	cubits	metres	cubits
Stairs to "E"	70.808	134.2.2	71.049	135.5.3	71.291	136.2.0
"E" to end	10.400	19.6.½	10.537	20.1.0	12.779	24.3.0
Total length	81.208	155.1.2-½	81.586	155.6.3	84.069	160.5.0

The difference between the P. Turin total of 160.5.0 cubits and the total obtained by Berkeley and by Carter is about 4.5.1 cubits. On our chart of tomb 2 measurements, note that Chamber "I" measurements given in P. Turin differ from those of Berkeley and Carter by about 4.5.1 cubits.

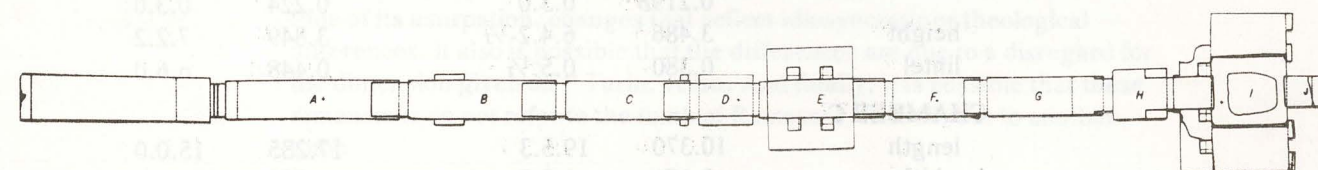
Berkeley measurement "E" to end	19.6.½
Add to chamber "I"	4.5.1
	24.4.½

Berkeley total tomb length	155.1.2½
Add to chamber "I"	4.5.1
Revised Berkeley tomb length	159.6.3½

P. Turin total tomb length	160.5.0
----------------------------	---------

Chamber "I" was left unfinished. One can assume that, had it been completed, it would have been 4.5.1 cubits longer and, therefore, that the total tomb length would have been almost exactly the value given in P. Turin.

We tried substituting other values for the cubit in our calculations, but found that, in the tomb of Ramesses IV, none fit as well as the 0.5231 metres proposed by Carter. That is not the case, however, in the tomb of Ramses VI.



Plan of the tomb of Ramesses VI, KV 9

THE TOMB OF RAMESSES VI: KV 9

Alan Gardiner once suggested that measurements preserved on the verso of P. Turin might be those of the tomb of Ramesses VI. This view was based in part on the assumption that the verso was written later than the recto and that it must represent measurements of a tomb built after that of Ramesses IV. The logical candidate seemed to be that of Ramesses V, a tomb usurped by Ramesses VI.

When comparing the measurements of the tomb given on P. Turin, verso, with those obtained by the Berkeley Project, it seems at least possible that this is the case. Of the 31 measurements given, 3 correspond exactly to the Berkeley figures; 15 are within 0.02 metres; another 7 are within 0.05 metres.

Feature	Berkeley		P. Turin	
	metres	cubits	metres	cubits
GATE A				
length	1.380	2.4.2		
width	2.757	5.1.3-½		
height	2.782	7.1.2-½		
CHAMBER A				
length	14.300	27.2.1-½		
width	3.208	6.0.3-½		
height	3.946	7.1.3-½		
GATE B				
length	0.760	1.3.½	0.747	1.3.0
width	2.808	5.2.2	2.728	5.1.2
height	3.753	7.1.1	3.736	7.1.0
lintel	0.456	0.6.½	1.495	2.6.0 ^a
CHAMBER B				
length	12.370	23.4.2		
width	3.156	6.0.1		
height	3.646	6.6.3	3.662	7.0.0
GATE C				
length	0.760	1.3.½	0.747	1.3.0
width	2.716	5.1.1-½	2.784	5.2.1
	0.219 ^b	0.3.0	0.224	0.3.0
height	3.486	6.4.2-½	3.849	7.2.2
lintel	0.380	0.5.½	0.448	0.6.0
CHAMBER C				
length	10.370	19.5.3	17.285	15.0.0
width	3.171	6.0.2	4.708	9.0.0
height	3.668	7.0.½	3.662	7.0.0

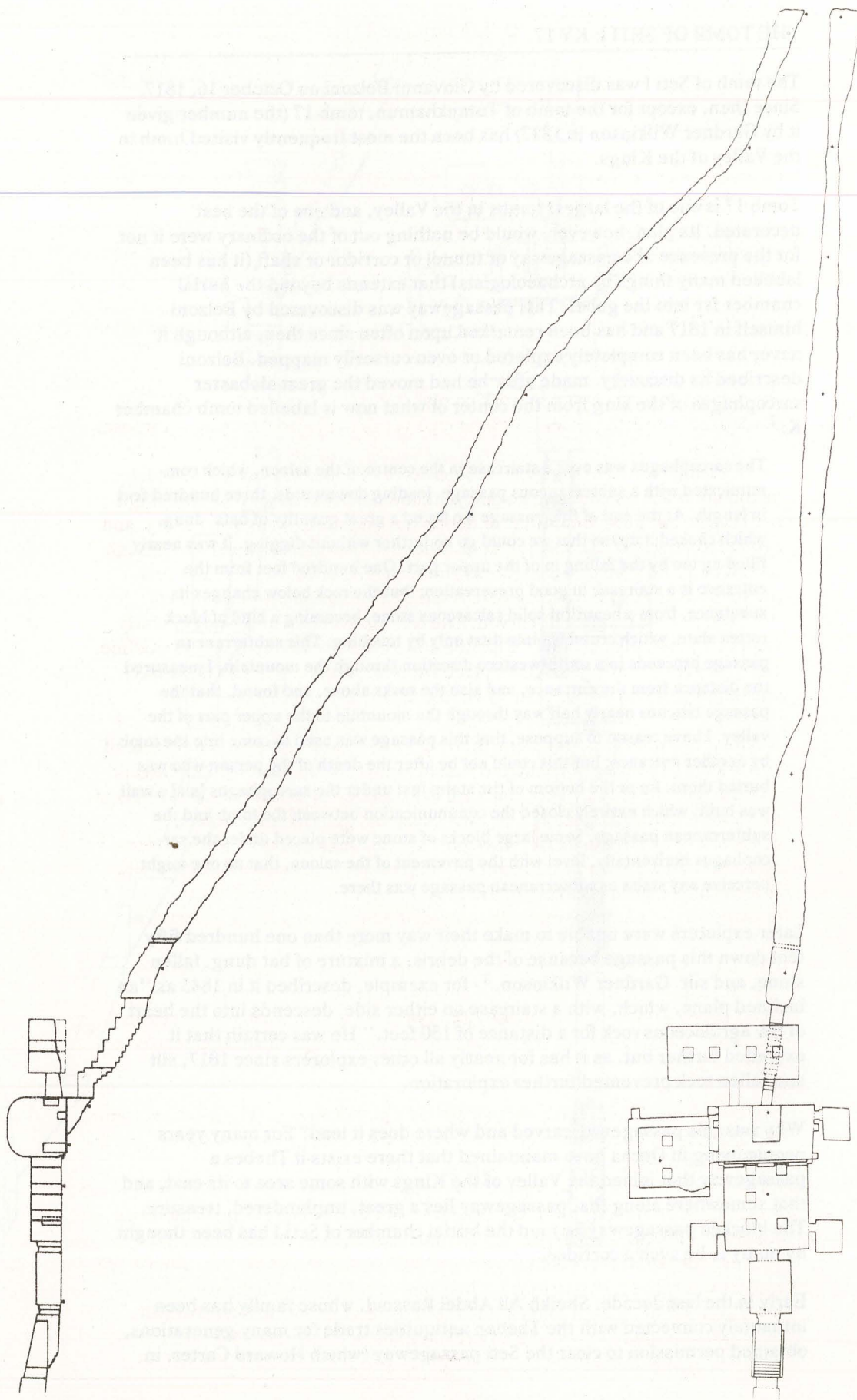
Feature	Berkeley		P. Turin	
	metres	cubits	metres	cubits
GATE D				
length	0.750	1.3.0	0.7659	1.3.1
width	2.740	5.1.2-½	2.6902	5.1.0
	0.720 ^b	1.2.3-½	0.1868	0.2.2
height	3.523	6.5.1½		
lintel	0.364	0.4.3-½	0.3736	0.5.0
CHAMBER D				
length	4.510	8.4.1-½	4.4837	8.4.0
width	4.166	7.6.3	4.1848	8.0.0
height	3.638	6.6.3	3.6617	7.0.0
GATE E				
length	0.520	1.0.0	0.7473	1.3.0
width	2.699	5.1.½	2.7276	5.1.2
	0.737 ^b	1.2.3-½	0.2242	0.3.0
height	3.269	6.1.3	3.2133	6.1.0
lintel	0.377	0.5.0	0.3736	0.5.0
CHAMBER E				
length	7.220	13.5.2-½	7.2486	13.6.0
width	8.424	16.0.3	8.3696	16.0.0
height	3.674	7.0.0	3.6617	7.0.0
GATE F				
length	0.610	1.1.½	1.9564	2.2.0
width	2.704	5.1.1	2.6902	5.1.0
height	3.426	6.3.3-½		
lintel	0.250	0.3.1-½	0.3736	0.5.0

a. One might assume an error in the papyrus at this point: reading 0.6.0 instead of 2.6.0 would be very close to the actual measurement.

b. The second width measurement for gates C, D, and E is a measurement of the thickness of the jamb.

In spite of the many similarities between P. Turin and Berkeley measurements, there are some glaring differences, especially in chamber "C". There also are frequent differences in the measurements of gates. Some of these may represent alterations in tomb dimensions that occurred at the time of its usurpation, changes that reflect idiosyncratic or theological differences. It also is possible that the differences are due to a disregard for the dimension given on P. Turin, verso. And finally, it is possible that these dimensions do not refer to the tomb of Ramesses VI at all, but to another tomb.

This last possibility seems unlikely, however, because of the generally close fit of the measurements.



Plan and section of passageway "Q" in the tomb of Seti I, KV 17

1903, had labelled chamber "Q"). A large-scale project was undertaken to clear "Q", and substantial progress was made until bad air, dust, extremely dangerous stone, and lack of funds forced a halt to the project. Sheikh Ali did succeed, however, in digging a tunnel through the debris-filled passageway some 136 metres beyond chamber "P".

One view of the purpose of "Q" was expressed by Elizabeth Thomas in *The Royal Necropolies of Thebes*. She noted that several royal tombs have chambers that lead off the burial chamber.⁴ "These elements," she observed, "appear to pertain to the hall, with no attempt to extend the tomb per se." Seti's passageway does extend the tomb, of course, "several hundred meters, at least," but she believed that this was merely an elaboration of the form of subsidiary chambers found around the burial hall in such tombs as those of Horemhab or Ramesses II.

Prior to our second season of work no plan had ever been made of "Q". It is perhaps this plan that offers the best clue yet as to the passageway's purpose.

The clearing of the passageway undertaken by Sheikh Ali was not complete: he did not reach its end, and no one yet knows exactly where that end might be. He also left great quantities of debris hanging from walls and ceiling, and even more remains piled on the floor. The result is more a tunnel cut through passageway fill than exposure of the tunnel itself. In two places, however, probes through this remaining debris indicated that the original walls of "Q" were vertical and well-carved. The ceilings were smooth and regularly sloped. The floor consisted of a double staircase with a ramp down its midline. There appear to have been gates placed at intervals along the passageway; one of them, noted on our plan, is visible today.

All these features are clear signs that "Q" was a carefully-planned feature of Seti's tomb, a passageway cut and sealed before the alabaster sarcophagus was dragged into place. This planning is further emphasized by the care taken to insure that the axis line of "Q" was close to that of the preceding passageways (chambers "G" through "J"), a fact that would be even more apparent had we been able to map the original passage walls rather than the sides of the modern excavation. Thomas, remember, argued that the passageway was a deliberate extension of the tomb along its principal axis.

The dimensions of passageway "Q" are especially interesting. Chambers "A" through "J" in tomb 17 slope downward at an average angle of 16°. "Q", however, slopes at an average angle of 32° and in some places reaches 47°. This is an angle steep enough to require that a rope be used in places to move in or out.

The length of the excavated part of "Q" is 136.210 metres. The distance from the entrance of tomb 17 to "Q" is 93.998 metres. Thus, the total known length of the tomb of Seti I is 230.208 metres.

The entrance of tomb 17 lies 178.00 metres above mean sea level. The burial chamber, and the entrance to "Q", lie about 26 metres lower, at 152.523 metres. The farthest accessible point in "Q" lies at 79.099 metres, almost 100 metres below the tomb entrance. This point is only 2 metres above the average level of the Nile flood plain at Thebes and only 4 metres above the mean level of the river itself. It would have been below the level of the Nile's flood waters in ancient times.

Why would so steeply sloping a passageway have been carved? It cannot have been intended to join some area east of KV, for it is dug far below the level of any such feature. For the same reason, it cannot have been intended to lead to any known structure elsewhere in the Valley. Dr. Gerhard Haeny, Director of the Schweizerisches Institut in Cairo, has suggested to us that perhaps "Q" was simply heading for water. He observes that physically joining the burial chamber to the waters of the Nile may be an objective similar to that achieved in the cenotaph of Seti I at Abydos. There, as Henri Frankfort has described in some detail,⁵ Egyptian religious beliefs led the designers to construct a double flight of steps with an inclined ramp between them from a symbolic "island" down to groundwater. Frankfort thought this to be a deliberate "attempt to imitate the actual burial of the god." This also may have been the reason for passageway "Q". The passage makes as nearly direct a plunge to water as geology and engineering would have permitted. And because of this, there is a good chance that "Q" leads to a chamber into which groundwater was intended to seep, not to a chamber filled with gold and jewels. Its purpose was not to hide treasure, but to physically tie the burial place of the king to the primeval waters of Nun, symbolic of creation and rebirth.

One further comment should be made. The passageway in the tomb of Seti I is an extremely dangerous one to penetrate. Any archaeologist seeking to explore "Q" should be forewarned; the stone is fragile, the air is poor, the braces are weak. Care and study are necessary and, most important, proper equipment should be available before further exploration is undertaken.

The primary objective of the Berkeley Map is to provide a precise and complete record of the Necropolis today. But that same data can also tell us more of how the Necropolis grew and why its parts took the forms they did. Information of this kind is valuable: it tells us something about ancient engineering (as with the tomb of Ramesses IV); it helps identify tomb data (as with the tomb of Ramesses VI); and it helps explain the purpose of various chambers (as with the tomb of Seti I).

NOTES

1. Howard Carter and A.H. Gardiner, "The Tomb of Ramesses IV and the Turin Plan of a Royal Tomb," *Journal of Egyptian Archaeology* IV (1917): pp. 112-29.
2. G. Belzoni, *Narrative of the Operations and Recent Discoveries within the Pyramids, Temples, Tombs, and Excavations, in Egypt and Nubia* ... London: John Murray, 1820: pp. 236-37.
3. Gardner Wilkinson, *Modern Egypt and Thebes: Being a Description of Egypt*... London: John Murray, 1843: vol. II, p. 203.
4. Elizabeth Thomas, *The Royal Necropolies of Thebes*. Princeton, 1966: pp. 104-7 and 273ff.
5. H. Frankfort, *The Cenotaph of Seti I at Abydos*. London: Egypt Exploration Society, Memoir 39, 1933: pp. 27-28.

FUTURE PLANS

The Berkeley Theban Mapping Project is fortunate to have signed a contract with the University of California Press, which will undertake the publication of the 5-volume Theban Atlas. During the next year, we shall begin work designing the format for the Atlas, in consultation with several cartographic design firms and governmental agencies. At present, plans for the first volume of the Atlas call for a series of five-color topographic maps, published at a scale of 1:500, covering the Valley of the Kings and adjacent areas, and a series of two-color sheets with plans, sections, and details of each of the tombs in both the East and West Valleys. Accompanying these map sheets will be a handbook outlining the cartographic history of the Valley, discussing peculiarities and regularities evident in the plans, summarizing bibliographically the major works available on each tomb, and including in detail the measurements (expressed in metres and in cubits) that were taken for each feature in the tombs. The maps will be unbound, boxed flat, and offered in folio cases. They will be printed on archival stock to insure long life and minimal distortion. Should there be sufficient interest, a small number of sets also will be available on specially-treated stable-based plastic-coated sheets, similarly boxed in folio.

The aerial photographs acquired during this past season will be dealt with during the coming year, and it is hoped that all topographic sheets can be laid out, based on those photographs.

Work in the field will begin in April 1980 in the Valley of the Kings, which will be completed during the third season of work, and will continue in the Valley of the Queens, which we also anticipate completing that season.

It is hoped that the publication of the first Atlas volume will be available before the end of 1981, the second volume, to cover the Valley of the Queens, before the end of 1982.

We are grateful for the numerous suggestions and comments generated by our preliminary report last year, and we would again like to encourage comments, criticisms, and suggestions on the project and its format. Correspondence may be addressed to:

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